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July 3, 2008
USSN 10/575,991

Scripps Research Institute/Novartis
Site-Specific Incorporation of Redox Active Amino Acids into Proteins.

Dear Examiner Gebreyesus,

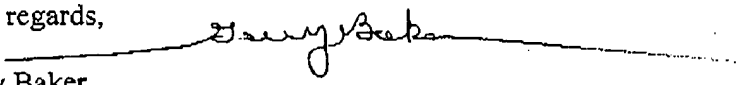
In the Final Office action of February 7, 2008, dependent claims 45 and 47 were not considered obvious or anticipated, but only subject to section 112 rejections. The Response of April 11, 2008 addressed these issues, but the Advisory Action of May 21, 2008, continued to note that the claims have certain relatively minor essentially grammatical antecedence issues remaining.

Based on your Advisory Action, and acceptable phraseology from related cases, I believe the following minor amendments would address the remaining issues:

- 45. (Proposed Amendment)** The composition of claim 31, further comprising:
- i) at least one orthogonal tRNA (O-tRNA), wherein the O-tRNA comprises or is encoded by a polynucleotide sequence as set forth in SEQ ID NO.: 2, ~~or a complementary polynucleotide sequence thereof;~~
 - ii) at least one orthogonal aminoacyl- tRNA synthetase (O-RS) comprising or derived from an RS selected from the group consisting of: an *Archaeoglobus fulgidus* synthetase, a *Methanosarcina mazei* synthetase, a *Methanobacterium thermoautotrophicum* synthetase, and a *Pyrococcus horikoshii* synthetase, wherein the O-RS preferentially aminoacylates the O-tRNA with the redox active amino acid; and
 - iii) a nucleic acid that encodes the protein, wherein the nucleic acid comprises at least two selector codons that are recognized by the O-tRNA.
- 47. (Proposed amendment)** The composition of claim 31, further comprising an O-tRNA, an aminoacyl-tRNA synthetase comprising the amino acid sequence at least 90% identical to of SEQ ID NO: 1 that preferentially aminoacylates the O-tRNA with at least one of the two or more redox active amino acids, and a nucleic acid encoding a polypeptide of interest, said nucleic acid comprising at least ~~two~~ one selector codons that ~~is~~ are recognized by the O-tRNA.

Please review these claims, in light of the advisory Action and let me know if a simple amendment can render the claims allowable or to schedule an interview.

Best regards,


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